Condition 109	Roadway Safety Analysis

Prior to commencing construction activities at the Giacomazzi site, the applicant shall submit to the Department of Public Works for review and approval a Roadway Safety Analysis (RSA) for the intersection of the treatment plant access road with Los Osos Valley Road. The RSA shall be prepared by a registered civil engineer with expertise in transportation design and familiarity with the Los Osos Valley Road corridor, and shall include but not be limited to the following:

a) Evaluate the proximity of the cemetery access road with the project access road and discuss corrective options including realignment, road mergers (sharing) and alternative project access road locations;

b) Analyze the project access road sight distance with respect to Los Osos Valley Road and recommend improvements, if required;

c) Analyze Los Osos Valley Road left turn lane warrants and traffic queuing at the project access road and recommend improvements, if required;

d) Evaluate Los Osos Valley Road traffic safety a minimum of 1-mile either side of the treatment plant access road and provide recommendations for improvements, if required;

e) Evaluate erosion control measures such as gravel pads, rumble strips and wheel washers to avoid the tracking of dirt and sediment onto adjacent private and public roadways during construction, and recommend best management practices to be implement; and

f) Evaluate onsite circulation with specific emphasis on truck maneuvering, access for emergency vehicles, onsite parking, and all-weather roadbed materials, provide recommendations and an implementation plan.

All RSA recommendations shall be implemented prior to commencing construction activities.

Evidence of compliance:

a) This project shall construct a new access road from the intersection of Los Osos Valley Road and Clark Valley Road to the site. Per Attachment 1 - Memo prepared by the County Public Works Transportation Division, dated November 9, 2010 , discusses using the existing entrance on the east side of the cemetery as the project access road. The cemetery, residential driveway, and plant access road are proposed to have a single shared entrance. The intersection is to remain un-signaled.
b) The current entrance location meets the sight distance criteria per Section 405.1 of the Caltrans Highway Design Manual.
c) Improvements along Los Osos Valley Road include increasing the length of the existing left turn lane.
d) In 2009 a speed survey was conducted on LOVR at the intersection of Buckskin Drive (approximately 1 mile west of the project location) the measured prevailing speed at location was 56 miles per hour. It is reasonable to assume that the speed on LOVR at Clark Valley road is similar.
e) The contractor will be required to maintain a temporary construction roadway until the new asphalt paved access road is constructed. To minimize generation of dust and tracking of soil and sediment onto public roads, a minimum 12-ft by 24-ft by 6-in deep dense graded crushed stone pad at the entrance off of Los Osos Valley Road will be installed prior to grading activities.
f) Per Attachment 2, an asphalt paved access road will be provided around the perimeter of the on-site facilities. The recycled water storage ponds will have a gravel road around the perimeter of the ponds.

Condition Satisfied

Director, SLO County Planning

12/4/13
Date

Attachment 1

SAN LUIS OBISPO COUNTY
DEPARTMENT OF PUBLIC WORKS
Paavo Ogren, Director
County Government Center, Room 207 • San Luis Obispo CA 93408 • (805) 781-5252
Fax (805) 781-1229 email address: pwd@co.slo.ca.us

MEMORANDUM

Date: November 9, 2010

TO: Frank Honeycutt

FROM: Ryan Chapman

SUBJECT: Proposed Los Osos Wastewater Treatment Plant Entrance

I have reviewed the proposed alternatives for the construction of an entrance to access the proposed Los Osos wastewater treatment plant (LOWWTP) site north of Los Osos Valley Road (LOVR). The two alternatives that were considered were;

1. Construct the entrance adjacent to the existing entrance on the east side of the cemetery.
2. Relocate the entrance to a point to the east that does not interfere with the operation of roads or entrances intersection LOVR in the vicinity.

The recommended alternative is option 1 with the following criteria:

- Increase the length of the left turn storage and deceleration lane to 535 feet for the westerly approach of LOVR.
- Combine the three entrances on the north side of the road into a single shared entrance.
- Eliminate or minimize the intersection offset between Clark Valley Road and the Entrance.

Current Conditions

LOVR is a two lane arterial with 4 to 8 foot wide class II bicycle lanes attached. There is a dedicated left turn lane for the intersection of Clarke Valley Road on the southerly side of the road and three driveways on the north side, the Cemetery driveway, a gravel driveway currently accessing the project site, and a residential driveway 140 feet east of the intersection. The attached exhibit details the existing geometric conditions.

The Caltrans Highway Design Manual section 405.1 states that a minimum of 7.5 seconds should be available for corner sight distance. Based on a field review there is

8.7 seconds available east of the existing entrance and 9.5 seconds available to the west of the existing entrance. The current entrance location meets the sight distance criteria.

In 2009 a speed survey was conducted on LOVR at the intersection of Buckskin Drive (approximately 1 mile west of the project location) the measured prevailing speed at location was 56 miles per hour. It is reasonable to assume that the speed on LOVR at Clark Valley road is similar.

During the period between 2005 and 2009 the section of LOVR between Buckskin Drive and Jacaranda Lane had a collision rate of 0.64 MVM. This is significantly less than the state average of 1.89 MVM. The intersection of LOVR and Clarke Valley had 0.13 Collisions per million vehicle entering (MVE) the State average is 0.29 MVE.

Access Issues
Currently there are 4 access points onto Los Osos Valley Road within a 150 foot distance. The County Standards (section 4.1.5 E) state that entrances on Arterial roadways should be 200 feet away from the roadway. To accommodate this distance the following would have to occur:

- Alternative 1: The Existing driveways should be combined into a shared entrance on the north side of the road.
- Alternative 2: The new entrance would have to be placed between the two identified residential entrances such that it was no closer that 200 from either entrance, or combined with an existing residential entrance that is at least 200 feet away from any other entrance.

In conjunction with the driveway spacing there are operational impacts caused by offsetting the entrance on LOVR across from Clark Valley Road. A large offset can create additional conflict areas for turning traffic and cause head on accidents for traffic passing through the intersection. In this case, the estimated traffic driving from Clark Valley Road to the entrance is low so the left turn conflicts govern the intersection

Any offset should be made as small as possible and can not be greater than16 feet. This can be accomplished by either partially reconstructing the intersection of Clarke Valley Road or relocating the entrance per option 2. A topographical survey and preliminary design should be preformed to verify the proposed alignments intersection offset is within these limits.

Traffic Impacts
ATE prepared a report in October of 2008 that examined the impacts of four proposed sewer projects. Using the data provided from that report the project impacts to the intersection are not anticipated to lower the LOS below C.

The queuing of left tuning vehicles related to the project on LOVR can be accommodated by extending the existing left turn pockets at the intersection of Clarke

Valley Road and LOVR. The current left turn lane and pocket do not have sufficient length to accommodate storage. Deceleration would require a minimum of 535 feet (485 feet deceleration and 50 foot storage) plus a 120 foot bay taper. The County Standards do allow for the decrease of the deceleration lane if approved by the County. Considering that large trucks will require longer lengths to decelerate and the high volumes on this section of road reducing the deceleration length is not recommended.

Recommendations
While Option 1 is preferable due to the good sight distance and ability to keep the entrance across from the Clark Valley Road intersection, either option could meet the criteria with the following elements being addressed:

For alternative 1:

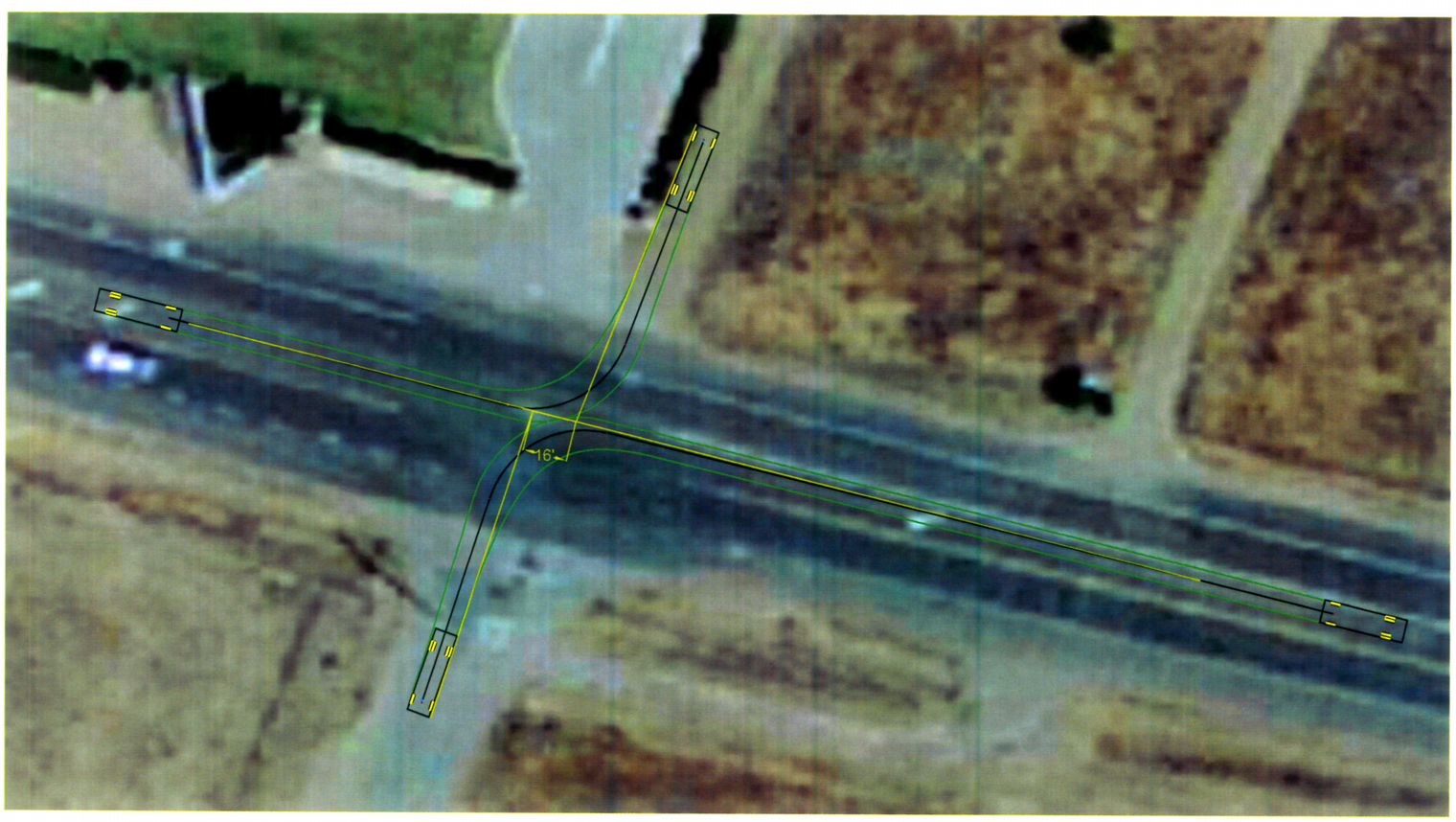
1. Increase the length of the left turn storage and deceleration lane to 535 feet for the westerly approach of Los Osos Valley Road.
2. Combine the three entrances on the north side of the road into a single shared entrance.
3. Eliminate or minimize the intersection offset between Clark Valley Road and the entrance.

For alternative 2:

1. Provide a left turn storage and deceleration lane to 535 feet for the westerly approach of Los Osos Valley Road.
2. Keep the proposed entrance at least 200 feet from the nearest existing entrance.
3. Ensure that there is adequate sight distance at the final entrance location.

I can evaluate any proposed entrance location in the field to check for sight distance and identify obstructions, or answer any questions that might come up.

Exhibit - Existing Conditions
10/27/2010



Intersection Centerline Offset

Attachment 2

PROPERTY LINE

0 30' 60' 120'

FENCE

GIACOMAZZI PROPERTY

LOS OSOS VALLEY MORTUARY AND MEMORIAL PARK

BRANIN PROPERTY

MAIN ENTRANCE

SERVICE ENTRANCE

PROPERTY LINE

ANDRE PROPERTY

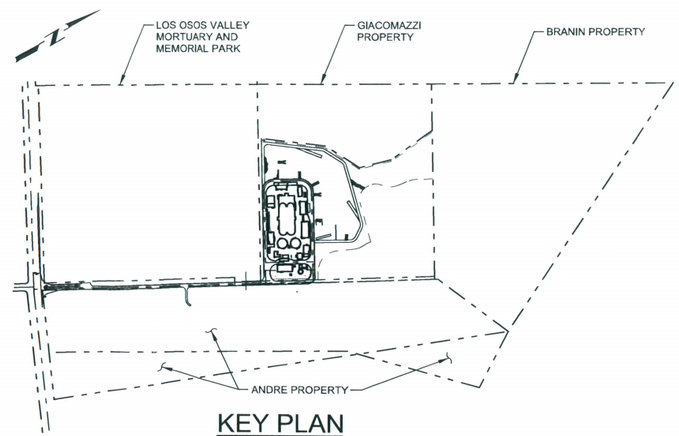
BASIS OF BEARING:

THE SURVEY CONTROL FOR THIS SURVEY IS TIED TO THE CONTROL SURVEY PREPARED BY WALLACE GROUP IN 2005, AND RECORDED IN BOOK 92 OF RECORDS OF SURVEY AT PAGE 56 IN THE SAN LUIS OBISPO COUNTRY RECORDER'S OFFICE. THE HORIZONTAL DATUM IS THE NORTH AMERICAN DATUM OF 1983, EPOCH DATE OF 1991.35. THE PROJECTION USED IS THE CALIFORNIA COORDINATE SYSTEM OF 1983 (CCS83), ZONE 5.

COORDINATES AND ELEVATIONS ARE DERIVED BY REAL TIME KINEMATIC GPS (RTK) OBSERVATION CONSTRAINED TO POINT NUMBER 1026 OF SAID SURVEY. POINT 1026 IS A PK NAIL SET FOR AERIAL CONTROL AND IS LOCATED NEAR THE CENTERLINE OF RAVENNA AVENUE APPROXIMATELY 85 FEET NORTH OF THE INTERSECTION OF RAVENNA AVENUE APPROXIMATELY 85 FEET NORTH OF THE INTERSECTION OF RAVENNA AVENUE AND MANZANITA DRIVE IN THE TOWN OF LOS OSOS.

POINT 1026
N 2311497.23
E 5714471.36
NAD83/CCS83 ZONE 5
EL=121.20' NAVD88

AREA	KEY NOTES:
5	1 ADMINISTRATION BUILDING
6	2 MAINTENANCE BUILDING
10	3 HEADWORKS
11	4 ODOR CONTROL FACILITY
20	5 OXIDATION DITCH
21	6 SECONDARY CLARIFIERS
30	7 TERITIARY FILTERS
31	8 UV FACILITY
32	9 CHEMCIAL FACILITY
40	10 EFFLUENT PUMP STATION
2	11 REW STORAGE POND
50	12 SLUDGE STORAGE TANKS
51	13 DEWATERING BUILDING
4	14 PLANT DRAIN PUMP STATION
60	15 WATER STORAGE TANK
70	16 ELECTRICAL BUILDING
2	17 STORM WATER RETENTION POND
4	18 STORM DRAIN PUMP STATION
3	19 GROUNDWATER WELLS
23	20 SCUM PUMP STATION
	21 DESIGNATED ENVIRONMENTALLY SENSITIVE HABITAT AREA.
	22 REFER TO SECTION 01140 FOR PERMISSIBLE CONSTRUCTION ACTIVITIES IN THIS AREA.
	23 NOT USED
	24 NOT USED
28	25 FILTER INFLUENT PUMP STATION
29	26 FUTURE FLOCCULATION BASIN



KEY PLAN

REV	DATE	BY	DESCRIPTION
			60 % SUBMITTAL NOT FOR CONSTRUCTION

DESIGNED HGK
DRAWN DBJ
CHECKED
DATE FEBRUARY 2013

carollo

SAN LUIS OBISPO COUNTY

SAN LUIS OBISPO COUNTY
LOS OSOS WATER RECYCLING FACILITY PROJECT
GENERAL
OVERALL SITE PLAN

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 8930A.11
DRAWING NO. 00G09
SHEET NO. OF XX

PROJECT NO. 8930A.11 FILE NAME: 8930A11-00G09.dgn

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